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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,830	11/08/2001	Gregory J. McCollum	1704A1	1069

7590

12/27/2004

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EXAMINER

MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,830

Applicant(s)

MCCOLLUM ET AL.

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-22, 24-28, 30-49 and 57-114 is/are pending in the application.
- 4a) Of the above claim(s) 57-114 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 22-24, 28 and 30-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. As the previous restriction being argued as being incomplete in the remarks of 12 October 2004, followings are a complete restriction to one of the following inventions required under 35 U.S.C. 121:

- I. Claims 1, 2, 4-22, 24-28 and 30-49, drawn to an electrocoating process, classified in class 204, subclass 471+.
- II. Claims 57-79, drawn to a multi-layer composite coating, classified in class 428, subclass 462.
- III. Claims 80-97, drawn to a process for coating a metal substrate, classified in class 204, subclass 471+.
- IV. Claims 98-111, drawn to a curable coating composition, classified in class 428, subclass 462.
- V. Claims 112-114, drawn to an electrocoating process, classified in class 204, subclass 471+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a non-electrocoating process.

3. Inventions of Groups I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions: one to a process with a specified partially blocked aliphatic polyisocyanate curing agent and the other to a process with a specified curing agent.

4. Inventions of Groups I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP §

806.04, MPEP § 808.01). In the instant case the different inventions have different effects: one to a process with an electrodepositable coating composition and the other to a product obtained from a different electrodepositable coating composition containing the specified curing agent.

5. Inventions of Groups I and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions: one to a process with an electrodepositable coating composition comprising the recited amine salt groups and the other to a process with a different electrodepositable coating composition.

6. Inventions of Groups II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects: one to a product obtained from an electrodepositable

coating composition and the other to a process for coating metal substrate with an electrodepositable coating composition containing a different curing agent.

7. Inventions of Groups II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions: one with a specified partially blocked aliphatic polyisocyanate curing agent and the other with a specified cationic salt group-containing resin.

8. Inventions of Groups II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects: one to a product obtained from an electrodepositable coating composition containing the recited amine salt groups and the other to a process for coating metal substrate with a different electrodepositable coating composition.

9. Inventions of Groups III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a non-electrocoating process.

10. Inventions of Groups III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions: one to a process with an electrodepositable coating composition containing the recited curing agent and the other to a process with a different electrodepositable coating composition.

11. Inventions of Groups IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP §

806.04, MPEP § 808.01). In the instant case the different inventions have different functions: one to a product obtained from an electrodepositable coating composition and the other to a process with a different electrodepositable coating composition.

12. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for either of Groups II-V, restriction for examination purposes as indicated is proper.

13. During a previous telephone conversation with Attorney D. Altman on April 21, 2004 a provisional election was made with traverse to prosecute the invention of claims of Group I. Affirmation of this election must be made by applicant in replying to this Office action. Claims 57-114 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

14. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if

one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claims 1, 2, 4-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-281943A in view of CORRIGAN et al. (5,385,962) and either FAUL et al. (5,258,4600 or SCHUPP et al. (5,096,555), all the references cited in the last Office action. The reference's invention is directed to high weatherability electrodeposited paint composition and coating method. The reference discloses that the method comprises all the steps as claimed (page [0012] in page 6 of the translation through paragraph [0018] in page 8; paragraph [0067] in page 16 through paragraph [0071] in page 17; paragraph [0038] through [0040] in page 11; and Examples in page 23). The differences between the

reference and the above claims are the reference is silent on the position of the amino groups is pendant from or in the terminal position of the polymeric backbone, the transmission of the cured top coat and is the heating in a specified atmosphere

As to the first difference, FAUL discloses in an electrocoating process that "standard electrocoating baths generally contain polymers with pendant primary, secondary or tertiary amino groups as the principal resin component" (col. 3, lines 45-51). SCHUPP shows in an electrocoating process the use of aminoepoxy resins being the reaction product of epoxy-containing resins having preferably terminal epoxy groups with amino groups and/or hydroxyl groups (col. 3, lines 17-21). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as suggested by either FAUL or SCHUPP because the selection of any of known equivalent cationic amine salt-group containing resins would have been within the level of ordinary skill in the art.

As to the second difference, since the reference shows the use of the clear coat, it appears that the reference's cured top coat would have the recited transmission, in absence of evidence to the contrary.

As to the third difference, CORRIGAN shows the heating can be done by any convenient method such as by baking in oven or with banks of infrared heat lamps. As such, since the heating with the latter (banks of infrared heat lamps) would have done in the atmosphere of the type recited (that is no combustion evolved), the selection of any of known equivalent heatings would have been within the level of ordinary skill in the art.

As to the subject matter of claims 16-19, the selection of any of known equivalent blocking agents would have been within the level of ordinary skill in the art.

17. Claims 26-28 and 30-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '943 in view of CORRIGAN '962 and either FAUL '460 or SCHUPP '555 for the same reasons as set forth in the preceding paragraph.

18. Claims 25 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '943 in view of CORRIGAN '962 and either FAUL '460 or SCHUPP '555 as applied to claims 1-22 above, and further in view of ARMSTRONG et al. (5,277,709). The difference between the references as applied above and the

instant claim is the provision of a source of yttrium in the coating composition. ARMSTRONG shows the above limitation in an electrocoating process (see abstract; col. 3, lines 41-46; and col. 6, lines 52-60). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as suggested by ARMSTRONG because this would result in a coated substrate with high resistance to corrosion.

Response to Arguments

19. Applicant's arguments filed 12 October 2004 have been fully considered but they are not persuasive.

As to the argument on the incomplete restriction, a complete restriction has been made in the preceding paragraphs.

As to the argument to the restriction between claims 1-56 in one group and claims 112-114 in the other group, the record reflects that these groups are patentably distinct and have been properly considered. Also this application contains claims 57-114 drawn to an invention nonelected with traverse in the remarks filed 12 October 2004. A complete reply to the final rejection must include cancellation

of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

As to the argument that none of the references teach or suggest a method coating an electroconductive substrate using the recited composition and including the recited step of heating, the examiner finds this is to be unpersuasive. As to the recited composition, the selection of any of known equivalent cationic amine salt-group containing resins would have been within the level of ordinary skill in the art as asserted by the examiner. Further, it has been settled that "closely related homologs, analogs and isomers in chemistry may create a prima facie of obviousness". *In re Dillion* 16 USPQ 2d 1897; *In re Henze* 85 USPQ 261; *In re Hass* 60 USPQ 544; *In re Mills* 126 USPQ 513. As to the recited step of heating, since the heating with banks of infrared heat lamps would have done in the atmosphere of the type recited (that is no combustion evolved, hence no NO_x formation, and the selection of any of known equivalent heatings would have been within the level of ordinary skill in the art as asserted by the examiner.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

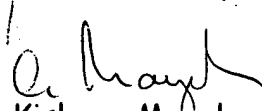
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kishor Mayekar
Primary Examiner
Art Unit 1753